

Claims: I claim:

1. A system for recovering heavy oil and bitumen from subsurface reservoir formations by combining an above-ground hydrocarbon powered turbine driven electric generator operating in simple cycle to produce electrical power, supply water in a heat exchange relation to the exhaust from said turbine to produce superheated high quality steam simultaneously with said power generation, injecting super heated steam from the surface down through the injection well bores into the hydrocarbon reservoir formation to heat the reservoir formation and induce steam assisted gravity drainage of the hydrocarbons.
2. A system of apparatus according to claim 1 wherein said electrical power is cogenerated from a above ground gas turbine driven electric generator in combined cycle with a companion electrical steam-driven generator and said power is sold into an electric grid.
3. The method of claim 1 where the superheated steam is used on heavy oil and bitumen hydrocarbon reservoirs with API gravities of at least 10° but not greater than 22°.
4. The method of claim 1 where superheated steam is used on heavy oil and bitumen hydrocarbon reservoirs with vertical thicknesses greater than 30 feet.
5. The method of claim 1 where superheated steam is used on heavy oil and bitumen reservoirs whereby the viscosity of the hydrocarbon in the reservoir can be reduced to less than 150 centipoise at reservoir conditions.
6. The method of claim 1 where the superheated steam is used on heavy oil and bitumen reservoirs that have average reservoir permeability's greater than 200 millidarcies.

7. The method of claim 1 where the superheated steam is used on heavy oil and bitumen reservoirs that have a bottom hole pressure that is less than 2000 pound per square inch.
8. The method of claim 1 where the superheated steam is used on heavy oil and bitumen reservoirs whereby the horizontal producing well bore is located near the base of the hydrocarbon reservoir.
9. A system of apparatus according to claim 1 wherein said gas fired turbine is fueled in all or in part by a portion of the hydrocarbons being produced from the hydrocarbon reservoir formation being steam flooded.
10. A system of apparatus according to claim 1 wherein a portion of said water for the heat recovery steam generating unit is supplied from the reservoir formation water that is simultaneously produced with the hydrocarbons from the hydrocarbon reservoir formation that is being steam flooded.
11. A system of apparatus according to claim 1 wherein the power that is generated will be in a distributed power system.